

Tolling Options for I-70, Independence to Wentzville



Executive Summary

Need

Interstate 70 was designed and constructed between 1956 and 1965. Its oldest sections are 58 years old and its youngest are 49 years old. The interstate was intended to carry 12,000-18,000 vehicles per day. Today, it carries an average of 28,000 vehicles per day in rural sections, with 10,000-13,000 trucks. At Independence near I-470, I-70 carries more than 98,000 vehicles per day with 25,000 trucks. At Wentzville near I-64, daily traffic is nearly 75,000 vehicles per day with 15,000 trucks.

Based on projected traffic growth, much of the corridor is expected to be in a stop-and-go condition by 2030. The corridor is beyond its designed capacity and needs to be expanded to allow I-70 to continue to be the east-west choice for out-of-state drivers.

I-70 also has preservation needs to ensure it is a viable facility for many years to come. Its original pavement has deteriorated under decades of mounting traffic to such a degree that surface treatments last for shorter and shorter periods. While what is on top may not look bad and provides an acceptable ride, what is underneath is far worse eroding the overall stability of the roadway. Additionally, all of I-70's mainline and crossroad bridges are nearing the end of their useful lives and will soon need to be replaced.

MoDOT has the necessary environmental approvals to reconstruct and expand 200 miles of I-70 from east of I-470 in Independence to I-64 near Wentzville. MoDOT also has "conditional provisional" approval from the Federal Highway Administration to rebuild I-70 as a toll road within the environmentally cleared limits. MoDOT is one of only three states enjoying such approval. This approval will expire if not acted upon.

The minimum cost of \$2 billion to reconstruct and expand I-70 is beyond MoDOT's means, but Missouri could explore tolling options available to move forward with a project that would rebuild Missouri's "Main Street."

The cost of operating and maintaining I-70 in its current condition is \$50-60 million per year. That includes resurfacing, bridge repairs, pothole patching, safety repairs, snow removal, mowing, litter pickup, etc. Reconstructing I-70 through some form of tolling could reduce some

of these costs and result in a new and expanded highway but it will not free up enough money to solve the overall transportation needs for Missouri.

The simplest and cheapest option for rebuilding I-70 is to use a design-build procurement method with the estimated \$2 billion cost funded with state or federal money. Under this model construction would take five years (following a period of procurement, financing arrangements and design) and MoDOT would retain operation and maintenance of the facility just as it does on all its highways. But since Missouri does not have \$2 billion for such a project, MoDOT was asked to develop the option of tolling I-70.

Tolling Options

As vehicles become more fuel efficient, federal and state fuel taxes have become a declining revenue stream and are insufficient to support Missouri's transportation system. Tolls provide a valuable alternative source of revenue both to build new roads and maintain existing roads. Thirty-four states currently have at least one toll facility.

The following provides a summary of tolling options in order of increasing cost as the risk of finance, operation and maintenance shift from the public to private sector. Those costs are ultimately passed on to the consumer.

Design-Build-Operate (DBO)

The design-build-operate (DBO) model uses design-build procurement with owner-operated tolling. The public sector retains maintenance and operation responsibility for the facility and is responsible for the design and construction. The toll facilities would be constructed and operated by MoDOT or a separate public tolling authority. The dedicated revenue stream from tolling is leveraged to issue public bonds to finance the design-build project. The public sector secures the project's financing and retains the operating revenue risk and any surplus operating revenue.

The total public financing cost is based on a combination of issuing public bonds and obtaining a TIFIA (Transportation Infrastructure Finance and Innovation Act) federal loan for a total amount of \$2.2 billion with repayment over 40 years, through low-interest tax-free debt. Currently, MoDOT does not have the ability to incur \$2.2 billion of debt because of the Missouri Highways and Transportation Commission's policy that bond payments may not exceed 20 percent of annual revenues. Another public entity (i.e., the State of Missouri, a separate tolling authority, or the like) would need to act as a conduit issuer of debt for the DBO option. The financing for this type of project is complex and could contain a variety of financing options available to public entities.

Additional costs for construction of toll facilities, toll operation costs, maintenance and financing are ultimately passed on to the consumer.

Public-Private Partnership Design Build Operate Maintain (DBOM)

The design-build-operate-maintain (DBOM) model is an integrated partnership that combines the design and construction responsibilities of design-build procurements with operations and maintenance. These project components are procured from the private sector in a single contract with financing secured by the public sector. Given the ability of public sector agencies in the United States to issue low-interest tax-free debt, it is often more cost-effective for public project sponsors to issue debt than their private sector partners. With a DBOM contract, a private entity is responsible for design and construction as well as long-term operation and/or maintenance services. The public sector secures the project's financing and retains the operating revenue risk and any surplus operating revenue.

Additional costs for construction of toll facilities, toll operation costs, maintenance and financing are ultimately passed on to the consumer.

Public-Private Partnership Design Build Finance Operate Maintain (DBFOM):

The design-build-finance-operate-maintain (DBFOM) model is an integrated partnership that transfers the responsibilities for designing, building, financing, maintaining and operating the corridor to private sector partners. DBFOM projects are either partly or wholly financed by leveraging future dedicated revenue streams to issue bonds or other debt that provides funds for capital and project development costs. Direct user fees (tolls) are the most common dedicated revenue source. DBFOM projects often extend for a period of 30 to 50 years or even longer, and are awarded under competitive bidding conditions. The DBFOM method is often attractive to public transportation agencies, as they can provide access to new sources of equity and financing, and deliver similar schedule and cost-efficiency benefits as design-build and DBOM procurements.

The private sector secures the project's financing and retains the operating revenue risk and any surplus operating revenue. Ultimately, any cost premium from privately financing a project must be offset by other project execution efficiencies derived from the private partner's participation, such as design or construction innovations or lifecycle operations and maintenance cost savings.

Additional costs for construction of toll facilities, toll operation costs, maintenance and financing are ultimately passed on to the consumer.

Availability Payments

For DBFOM projects, public sponsors may provide subsidies as part of an overall financing package for tolling projects. These subsidies, also known as availability payments, can be derived from a variety of sources including but not limited to existing gas taxes or general revenue. Availability payments are used when the toll facility does not generate enough revenue

to cover the cost of the project. Availability payments also help reduce the risk of revenue generation for the private sector and can lower toll rates for the customer.

Public-Private Partnership Long-Term Lease Concession Option

The long-term lease concession model is an integrated partnership which involves the long-term lease of existing publicly-owned facilities to a private-sector concessionaire for a prescribed concession period during which they have the right to collect tolls on the facility. In exchange, the private partner must operate and maintain the facility and in some cases make improvements to it. The private partner must also pay an upfront concession fee.

Long-term lease projects often extend for a period of 75 to 100 years, and are procured on a competitive basis, with awards going to the qualified bidder making the most attractive offer to the sponsoring agency. The most important criterion for the award of a long-term lease concession generally is the amount of the concession fee paid to the government entity. Other criteria may include the length of the concession period and the credit worthiness and professional qualifications of the bidders.

Additional costs for construction of toll facilities, toll operation costs, maintenance and financing are ultimately passed on to the consumer.

Conclusion

In MoDOT's current financial condition, with no indication that additional revenue is expected at either the federal or state levels, the use of tolling as a revenue source for the reconstruction and expansion of I-70 is worthy of consideration. An investment grade traffic study would have to be completed to determine the specifics on financial costs, toll rates, toll plaza locations and other tolling aspects. Based on the current traffic, it is likely that a trip across the state on I-70 would cost \$20-\$30 per car (\$40-\$90 for trucks) to generate enough funds to pay for the \$2 billion project. This assumes that every single vehicle on the road pays a toll. If tolls were reduced below these levels or certain vehicles were exempted, additional availability payments from current funding sources or general revenue would be necessary.

The use of tolling on I-70 to reconstruct and expand 200 miles of Missouri's interstate is an important step in meeting Missouri's transportation needs. However, it does not address the remaining 33,000 miles of highways, 10,000 bridges or other overall transportation needs of the state. Ultimately, a tolled system of Missouri's primary freight corridors is an option to create additional revenue for Missouri's other transportation needs.